



Oral Health – Community Water Fluoridation

The percentage of the Louisiana population receiving the benefit of optimally fluoridated water is proportional to the number of public water systems providing fluoridated water. Current funding permits a certain number of water systems to initiate fluoridation. An increase in funding would facilitate initiation of fluoridation of more water systems, thereby increasing the percentage of citizens receiving fluoridated water. A decrease in funding would limit the number of water systems that could convert to fluoridation, thereby causing a less sizeable, less rapid increase in the population receiving fluoridated water.

Objective

By June 30, 2011, the Oral Health Program will ensure the safe delivery of optimally fluoridated water such that there is an increase in the percentage of the Louisiana population receiving the oral health benefits of community water fluoridation from 40.7% to 42%.

Performance Indicators

1. Number of LA public water systems performing fluoridation
2. Number of LA public water systems receiving the CDC Water Quality Awards
3. Number of trainings conducted for operators of fluoridated systems
4. Number of community outreach/health education presentations

Fluoridated water prevents tooth decay, and thus wards off cavities and other oral health problems. The Fluoridation Program is responsible for assisting and supporting communities and public water systems initiate and maintain safe community water fluoridation (CWF). The program is comprised of a Fluoridation Engineer and a Fluoridation Coordinator. The Fluoridation Engineer is responsible for delivering technical assistance to water systems as well as approving design plans for systems that are initiating CWF. The Fluoridation Coordinator works with community organizations for the promotion of community water fluoridation, provides health education to community leaders, assists the Fluoridation Advisory Board (created by 1998 Louisiana Senate Bill 963) with logistics for their meetings, and works closely

with the Fluoridation Engineer in the development and management of the Fluoridation Program.

In the 2008 Regular Session, the Louisiana legislature passed Act 761 making fluoridation mandatory by law for water systems with at least 5,000 service connections. There were a total of 26 water systems affected by the mandate. These systems are required to initiate fluoridation when funding is available from the Fluoridation Program.

The Fluoridation Program also provides operator training to those water systems adjusting for the fluoride ion. Fluoride levels for optimum oral health benefits have been set by the US Public Health Service and the Centers for Disease Control (CDC) at a range of between 0.7 mg/L and 1.2 mg/L. In Louisiana, the level is 0.8 mg/L. To ensure that fluoridation levels are being properly and safely maintained, the CDC developed the Water Fluoridating Reporting System (WFRS), an internet-based national database. Per the State of Louisiana Office of Public Health's "Fluoridation Management Program", each fluoridating public water system is to check the levels of treatment chemicals, like fluoride, daily and issue a monthly report to the State. These reports supply the data that is entered into the CDC's WFRS database. Samples of treated water are analyzed by split sampling on a monthly basis to ensure consistent fluoride delivery. The proper equipment design, operation of facilities, testing, and reporting results are necessary to insure the safety of population being served.

The Fluoridation Program is responsible for assisting and supporting communities and public water systems initiate and maintain safe CWF. The Program approves design plans for water systems to insure safe and proper fluoridation initiation, funds equipment and chemicals costs, works with communities for the promotion of CWF, and provides health education to public leaders, governing bodies, civic groups. The Program provides this assistance and guidance so that the initiation process occurs correctly, safely, in a timely manner; that all parties are adequately prepared for the transition and are knowledgeable about CWF safety and benefits. These efforts ensure that the fluoridation process is a successful, cost-effective, and efficient transition.

CWF provides oral health prevention to all segments of the population regardless of a person's age, education-level, income-level, race, or means to access dental services. All persons are at risk for tooth decay; however certain subpopulations are at increased risk- children, the elderly, smokers, those with a poor diet, certain races, those of lower economic status, and those who are uninsured. In Louisiana, the CWF targeted population consists of the communities that have no CWF, approximately 2.5 million people. Act 761 specifically identifies systems with at least 5000 service connections, affecting 1.3 million people. Communities served by those systems are of primary interest. Interest is also given to systems that previously fluoridated but

have since discontinued, and systems with less than 5000 connections that want to initiate fluoridation.

The Fluoridation Program works closely with the Louisiana Dental Associations' Healthy Smiles Coalition; collaborates with coalitions, task forces, community planning, policy makers, community-based organizations, governing bodies of local governments, water system operators.

Act 761 of the Louisiana 2008 Regular Session mandates fluoridation of water systems with at least 5000 service connections.

CWF in the US began in 1945. More than 60 years later, CWF continues to be the most effective intervention in reducing dental decay. In 1999, the CDC named community water fluoridation one of the top ten greatest achievements in public health. The Healthy People 2010 goal is for 75% of the US population to receive the oral health benefits of CWF.

The CDC cites that for every \$1 invested in CWF, the subsequent savings from fewer dental treatments is \$38. The CDC reports that the average cost of CWF over a lifetime is, in general, less than the cost to have one cavity filled. Research from LA shows that Medicaid -eligible children that live in fluoridated parishes incur dental service charges of approximately \$15 to \$60 less than those in non-fluoridated parishes. Children residing in non-fluoridated were more likely to receive costly caries-related treatments and operation room (OR)- based care (CDC, 1999). In LA, Medicaid-eligible children aged 1-5 years old that received dental care in a hospital incurred a mean cost for care of \$1,508. Dental care received outside of a hospital only had a mean cost of \$104. The children who sought dental care in the hospital represented only 5% of the study population, but were responsible for 45% of total dental costs. The dental costs for the children that sought care in the hospital totaled over \$3 million (Griffin, Gooch, Beltran, Sutherland, & Barsley, 2000). Dental Medicaid expenditures for children in LA in FY 2008 was \$77.3 mil. Expansion of CWF would contribute to improved oral health, lower Medicaid expenditures for dental care, lower personal costs.

Poor oral health and its effects concerning the mouth and other systemic effects, which cause pain, impairment, and loss of function, contributes to an overall decreased quality of life. CWF can prevent such unpleasant events from occurring.